



JAMES A. MUNICH, P.E.

Site:	A.L. Taylor
Break:	2.2.
Other:	

ENVIRONMENTAL CONSULTANTS, INC.

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3 April 1979

Mr. Jack Stonebraker
U.S. Environmental Protection Agency
Environmental Emergency Branch
Region IV
345 Courtland, N.E.
Atlanta, Georgia 30308

Dear Jack:

We are submitting the enclosed status report of work completed upon samples received from the Taylor Dump Site. The report will summarize the "known" compounds detected with quantities where verification was achieved. In addition, an outline of on-going work is included, with approximate completion dates, where appropriate.

This report is not intended to be the Final Report, and will serve as preliminary data, subject to modification at a later date. Supplemental data will follow when available, after verification.

Very truly yours,

ENVIRONMENTAL CONSULTANTS, INC.

Robert E. Fuchs
Laboratory Director

cc: John Gilbert, E.P.A., Cincinnati

enclosures

REF/pk



10951697

LIST OF SAMPLES RECEIVED FROM TAYLOR DUMP SITE AS OF

1 April 1979

<u>Date Received</u>	<u>Sample Description</u>	<u>E.C.I. #</u>
1. 4 March 1979	Point source discharge into Wilson Creek	14,592
2. 4 March 1979	Downstream 75 ft., Wilson Creek	14,593
3. 4 March 1979	Soil sample near point source	14,594
4. 4 March 1979	Contaminated pond	14,595
5. 4 March 1979	Hot spot #1	14,596
6. 4 March 1979	Hot spot #2	14,597
7. 4 March 1979	Downstream in Wilson Creek (several hundred yards, at tree mark #1)	14,598
8. 4 March 1979	Upstream of Taylor Dump	14,599
9. 6 March 1979	#1-306, 100 feet below overflow dam, Wilson Creek	14,606
10. 6 March 1979	#2-306, 100 feet above overflow dam, Wilson Creek	14,607
11. 6 March 1979	#3-306 Stream and swamp confluence 25 feet below #1 mark	14,608
12. 12 March 1979	Treatment pond--Influent	14,659
13. 13 March 1979	Treatment plant--Effluent	14,676
14. 16 March 1979	Soil sample #1	14,708
15. 23 March 1979	Treatment--Influent	14,753
16. 23 March 1979	Treatment--Effluent	14,754

The following brief synopsis describes each sample and the major laboratory actions and analyses thus far performed by this laboratory. All samples were grab samples.

Sample Description: POINT SOURCE DISCHARGE INTO WILSON CREEK
(E.C.I. #14,592)

Actions:

The sample was the first to be analyzed, and represents initial site sampling taken by Sholar before excavations. The primary method of analyses was GC/MS and revealed the following major compounds to be present:

ANALYSES RESULTS

<u>Compound</u>	<u>Amount*</u>
2-Butanone (methyl ethyl ketone)	14.79 ppm.
2-Butanol	20.74 ppm.
4-Methyl, 2-Pentanone (methyl isobutyl ketone)	7.0 ppm.
4-Methyl, 2 Pentanol	4.0 ppm.
Toluene	0.5 ppm.
2-Hexanone (methyl butyl ketone)	0.2 ppm.
5-Methyl, 2-Hexanone (methyl isoamyl ketone)	0.3 ppm.
5-Methyl, 2-Hexanol	2.0 ppm.
2-Heptanone (methyl n-amyl ketone)	4.0 ppm.
Xylenes (ortho, meta, para)	1.0 ppm.
Phenol	0.4 ppm.

*--Semi-quantification relative to: 2-Bromo-1-chloropropane

Sample Description: 75 FEET DOWNSTREAM OF POINT SOURCE
IN WILSON CREEK
(E.C.I. #14,593)

Actions:

The sample was analyzed by GC/FID programmed to detect the solvents found at point source.

ANALYSES RESULTS

<u>Compound</u>	<u>Amount</u>
4-Methyl, 2 Pentanone (Methyl isobutyl ketone)	Trace
Ethyl benzene	Trace
Xylene (ortho, meta, para)	Trace

Sample Description: SOIL SAMPLE TAKEN NEAR POINT SOURCE
(E.C.I. #14,594)

Actions:

Soil was extracted for a period of six (6) hours with Pentane, then submitted for GC/EC and GC/MS organic analyses. Additionally, an oil and grease residue analysis was performed.

E.C.I. #14,594 (Cont.)

ANALYSES RESULTS

<u>Compound</u>		<u>Amount</u>	<u>Method</u>
Ethyl benzene			
Toluene	Total	0.6 ppm.	GC/EC
Xylene			
Di butyl phthalate (plasticizer)		Not quantified	GC/EC
Ethyl benzene			GC/MS
4,Methyl,2-Pentanol			GC/MS
2-Heptanone			GC/MS
Trimethyl-benzene			GC/MS
2,Heptanone			GC/MS
4 Hydroxy, 4-methyl, 2-Pentanone			GC/MS
3,3,5-Trimethyl-cyclohexanone			GC/MS
2-(2-Ethoxyethoxy)-Ethanol			GC/MS
Naphthalene			GC/MS
1-(2-Butoxyethoxy)-Ethanol			GC/MS
1,1 ¹ -oxy-bis,2-Propanol			GC/MS
3-Bromo-Pentane			GC/MS
2-Ethyl-Hexanoic acid			GC/MS
Phenol			GC/MS
Octanoic acid			GC/MS
4-Methyl-Phenol			GC/MS
3-Methyl-Phenol			GC/MS
3,4-Dimethyl Phenol			GC/MS

E.C.I. #14,594 (Cont.)

ANALYSES RESULTS (Cont.)

<u>Compound</u>	<u>Amount</u>	<u>Method</u>
2,5-Dimethyl Phenol		GC/MS
Phosphoric acid-Tributyl ester		GC/MS
1-Phenyl, 1-Propanone		GC/MS
Ethene, (2-Ethoxy-1-Methoxyethoxy)-		GC/MS
Diethyl phthalate		GC/MS
Benaldehyde, 4 Hydroxy-3-methyl-		GC/MS
Butyl 2-methyl-propyl phthalate		GC/MS

The above compounds were not quantified.

Oil and grease	0.0017% dry weight basis	Partition/ gravimetric Silica column separation.
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Sample Description: CONTAMINATED POND

(E.C.I. #14,595)

Actions:

As per instruction, no analyses were performed on this sample.

Sample Description: HOT SPOT #1 TAKEN BY E.C.I. PERSONNEL,
NEAR OBSERVED RUNOFF AREA INTO WILSON CREEK.

(E.C.I. #14,596)

E.C.I. #14,596 (Cont.)

Actions:

The sample has been analyzed for the following solvents by GC/FID, neutral components using CS₂ as extractant; heavy metals by A.A., as listed below:

ANALYSES RESULTS

<u>Compound</u>	<u>Amount</u>	<u>Method</u>
2-Butanone (methyl Ethyl Ketone)	1 ppm.	GC/FID
Ethyl Benzine	10 ppm.	GC/FID
4 Methyl, 2-Pentanone (methyl Isobutyl Ketone)	1 ppm.	GC/FID
Toluene	4 ppm.	GC/FID
Xylenes (ortho, meta, para)	9 ppm.	GC/FID
<u>Additional Organics by GC/MS</u>		
4 methyl, 2-Pentanol		GC/MS
2 Hexanone (methyl butyl Ketone)		GC/MS
5-methyl, 2 Hexanone (methyl Isoamylketone)		GC/MS
2 Heptanone (methyl n-amylketone)		GC/MS
<u>Metals Analyses by Atomic Absorption</u>		
Cadmium	0.028 ppm.	A.A.
Chromium	0.048 ppm.	A.A.
Mercury	< 0.001 ppm.	Flameless A.A.
Lead	0.99 ppm.	A.A.

Sample Description: HOT SPOT #2 SAME AS ABOVE, EXCEPT
TAKEN AT ANOTHER LOCATION.

(E.C.I. #14,597)

Actions:

The sample has been analyzed for the following:
(Solvents by GC/MS; metals by A.A.)

ANALYSES RESULTS

<u>Compound</u>	<u>Amount</u>	<u>Method</u>
2-Butanone (methyl ethylketone)	*	GC/MS
4-methyl, 2-pentenone (methyl Isobutyl Ketone)	*	GC/MS
2-Hexanone (methyl butyl ketone)	*	GC/MS
Acetic acid, butyl ester	*	GC/MS
Toluene	*	GC/MS
5 methyl, 2-Hexanone (methyl isoamyl ketone)	*	GC/MS
Ethyl Benzene	*	GC/MS
Xylenes (ortho, meta, para)	*	GC/MS

*--Quantification to follow.

Metals

Cadmium	0.002 ppm.	A.A.
Chromium	0.503 ppm.	A.A.
Mercury	< 0.001 ppm.	Flameless A.A.
Lead	2.67 ppm.	A.A.

Sample Description: 100 FEET BELOW OVERFLOW DAM ON WILSON
CREEK

(E.C.I. #14,606)

Actions:

No solvents were detected at the sub-ppb. level
of detection.

Sample Description: 100 FEET ABOVE OVERFLOW DAM ON WILSON
CREEK

(E.C.I. #14,607)

Actions:

None taken, based upon negative findings of
previous sample.

Sample Description: CONFLUENCE OF STREAM AND SWAM BELOW
OVERFLOW DAM ON WILSON CREEK

(E.C.I. #14,608)

Actions:

The sample was analyzed for solvents by GC/FID.

ANALYSES RESULTS

<u>Compound</u>	<u>Amount</u>	<u>Method</u>
Xylenes (ortho, meta, para)	0.15 ppb.	GC/FID

Sample Description: INFLUENT TO TREATMENT POND

(E.C.I. #14,659)

Actions:

The sample was analyzed for solvents by GC/FID.

ANALYSES RESULTS

<u>Compound</u>	<u>Amount</u>	<u>Method</u>
2-Butanone (methyl Ethyl Ketone)		GC/FID
4-Methyl, 2-Pentanone (methyl isobutyl ketone)		GC/FID
Toluene		GC/FID
Ethyl benzene		GC/FID
Xylenes (ortho, meta, para)	3 ppm. (Total amount)	GC/FID

Sample Description: EFFLUENT FROM TREATMENT PLANT AFTER

CHARCOAL FILTRATION

(E.C.I. #14,676)

Actions:

The sample was analyzed for solvents by GC/FID and GC/MS.

ANALYSES RESULTS

<u>Compound</u>	<u>Amount</u>	<u>Method</u>
4-methyl, 2-Pentanone (methyl isobutyl ketone)		GC/FID
Toluene		GC/FID

E.C.I. #14,676 (Cont.)

ANALYSES RESULTS (Cont.)

<u>Compound</u>	<u>Amount</u>	<u>Method</u>
Ethyl benzene		GC/FID
Xylenes (ortho, meta, para)	22 ppb. (Total amount)	GC/FID
Carbon tetrachloride	*	GC/MS
Trichloroethene	*	GC/MS
2 Methyl, 2-Pentanone (methyl isobutyl ketone)	*	GC/MS
Tetrachloro-ethene	*	GC/MS
Toluene	*	GC/MS
Ethyl benzene	*	GC/MS
Xylenes (ortho, meta, para)	*	GC/MS

*--Not quantified by GC/MS

Sample Description: SOIL SAMPLE TAKEN NEAR A PILE OF REFUSE
WHERE SUSPECTED PCB CONTAMINATION EXISTS

(E.C.I. #14,708)

Actions:

The sample was extracted and analyzed by GC/EC
and confirmed by GC/MS.

ANALYSES RESULTS

<u>Compound</u>	<u>Amount</u>
PCB 1016	

E.C.I. #14,708 (Cont.)

ANALYSES RESULTS (Cont.)

<u>Compound</u>	<u>Amount</u>
PCB 1242	
PCB 1260	0.313 ppm. (wet basis)

PCB's confirmed on the basis of detection by GC/MS of four (4) isomers of chlorinated biphenol (trichlorophenol; tetrachlorophenol; hexachlorophenol; and heptachlorophenol).

Sample Description; INFLUENT TO TREATMENT
(E.C.I. #14,753)

Actions:

The sample was analyzed for solvents by GC/FID.

ANALYSES RESULTS

<u>Compound</u>	<u>Amount</u>	<u>Method</u>
2-Butanone (methyl ethyl ketone)		GC/FID
4-methyl, 2-Pentanone (methyl Isobutyl ketone)		GC/FID
Toluene		GC/FID
Ethyl benzene		GC/FID
Xylenes (ortho, meta, para)		GC/FID
5 other unknowns	2 ppm. (Total)	

Sample Description: EFFLUENT FROM TREATMENT AFTER CARBON
FILTRATION

(E.C.I. #14,754)

Actions:

The sample was analyzed for solvents by GC/FID.

ANALYSES RESULTS

<u>Compound</u>	<u>Amount</u>	<u>Method</u>
4-Methyl, 2-Pentanone (methyl Isobutyl Ketone)		GC/FID
Toluene		GC/FID
Ethyl benzene		GC/FID
Xylene		GC/FID
5 other unknowns	16 pp. (Total)	

Estimated percent completion under this contract is 70%.

ON-GOING SAMPLE ANALYSES

It is intended to submit for additional analyzes and completion, the following samples:

1. Treatment Pond Influent (E.C.I. #14,659)
2. Treatment Plant Effluent (E.C.I. #14,676)
3. Soil Sample #1 (E.C.I. #14,708)
4. Treatment Influent (E.C.I. #14,753)
5. Treatment Effluent (E.C.I. #14,754)

Each sample is presently undergoing further processing for full priority-pollutant protocol evaluations. Also, data from all submitted samples is being evaluated and verified in terms of proper identifications and quantification.

We expect to complete the final phase of sample analyses within two (2) weeks, followed by submittal of a Final Report. The expected completion date of the above is four (4) weeks from this date.

If there are any further questions, please contact me.



Robert E. Fuchs
Laboratory Director

REF/pk